



Waste Projections After Implementation of SWMP Actions

This chapter presents the projections of waste quantities for the City's solid waste management (SWM) system over the next 20 years. These projections reflect the implementation of the SWMP actions and, therefore, are different from the SWM system projections in Chapter 2.

Generation Projections

Since projecting source reduction and reuse quantities is problematic, waste projections in Chapter 2 are the City's most accurate estimates of solid waste generation.

The impacts of source reduction and reuse actions in the SWMP are reflected in solid waste generation projections. However, the City does not project source reduction and reuse quantities; calculating quantities of solid waste that are reduced prior to entering the waste stream is problematic. Therefore, the projections in Chapter 2 are the City's most accurate estimates of solid waste generation in the City of Falls Church over the next 20 years.

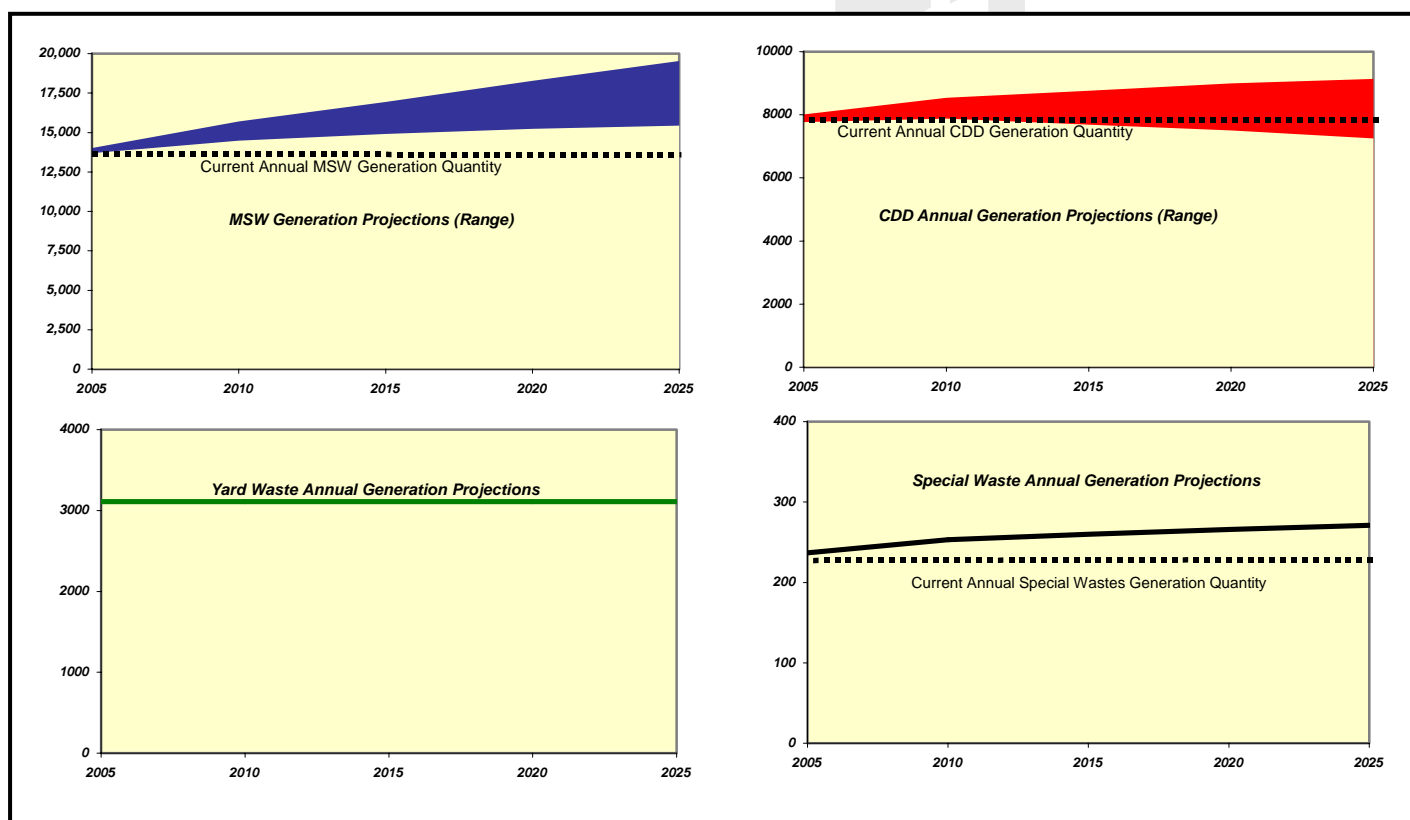


Table 2-9 of Chapter 2 shows the four alternative projections of MSW generated in the City of Falls Church over the next 20 years. Tables 2-10 and 2-11 present the City's two alternative projections of City-generated CDD. The City projects that yard waste generation quantities will remain at current levels (3,111 tons per year) throughout the SWMP planning period. Special wastes projections are presented in Table 2-12. Table 12-1 and Figure 12-1 show the generation projections for MSW, CDD, yard waste and special wastes. Note that yard waste and some special wastes (i.e., used oil, used antifreeze, tires, and batteries) are also components of MSW.

Table 12-1. City 20-Year Generation Projections for MSW, CDD, Yard Waste and Special Wastes (tons)

Year	MSW Generation (Range)	CDD Generation (Range)	Yard Waste Generation	Special Wastes Generation	MSW, Excluding Yard Waste and MSW Special Wastes (Range)
2004	13,645 - 13,822	7,816 - 7,975	3,111	236	10,298 - 10,475
2005	13,687 - 14,019	7,771 - 8,009	3,111	237	10,339 - 10,671
2010	14,492 - 15,707	7,878 - 8,538	3,111	253	11,128 - 12,343
2015	14,904 - 16,946	7,691 - 8,764	3,111	260	11,533 - 13,575
2020	15,237 - 18,271	7,503 - 8,991	3,111	266	11,860 - 14,874
2025	15,434 - 19,526	7,255 - 9,142	3,111	271	12,052 - 16,144

Figure 12-1. City 20-Year Generation Projections for MSW, CDD, Yard Waste and Special Wastes (tons)



Recycling Projections

The City projects that implementing the SWMP actions will increase the annual quantities of MSW and CDD recycled.

Implementing the recycling SWMP actions (discussed in Chapter 11) will increase the annual quantities of MSW and CDD recycled in the City of Falls Church. These increases are in addition to the recycling projections in Chapter 2, which assume the continuation of current recycling activities. The City does not project SWMP recycling actions to significantly impact yard waste and special waste recycling quantities.

Table 12-2 and Figure 12-2 show the recycling projections for MSW, CDD, yard wastes and special wastes. The calculation of the SWMP recycling projections is described below for each waste type.

Table 12-2. City 20-Year Recycling Projections for MSW, CDD, Yard Waste and Special Wastes (tons)

Year	MSW Recycling, Excluding Yard Waste and MSW Special Wastes (Range)	MSW Recyclables Managed by MRFs ¹ (Range)	CDD Recycling (Range)	Yard Waste Recycling	Special Waste Recyclables ²
2004	3,772 - 3,863	2,630 - 2,694	0	3,111	201
2005	3,877 - 4,051	2,703 - 2,825	78 - 80	3,111	201
2010	4,790 - 5,470	3,340 - 3,814	473 - 512	3,111	215
2015	5,760 - 7,006	4,016 - 4,885	846 - 964	3,111	220
2020	6,567 - 8,539	4,579 - 5,954	1,201 - 1,439	3,111	226
2025	6,691 - 9,351	4,665 - 6,520	1,451 - 1,828	3,111	230

1 - MSW recyclables managed at MRFs include paper, plastic, glass, and commingled bottles and cans

2 - Special waste recyclables include used oil, used antifreeze, tires, and batteries

Figure 12-2. City 20-Year Recycling Projections for MSW, Yard Waste, CDD and Special Wastes (tons)

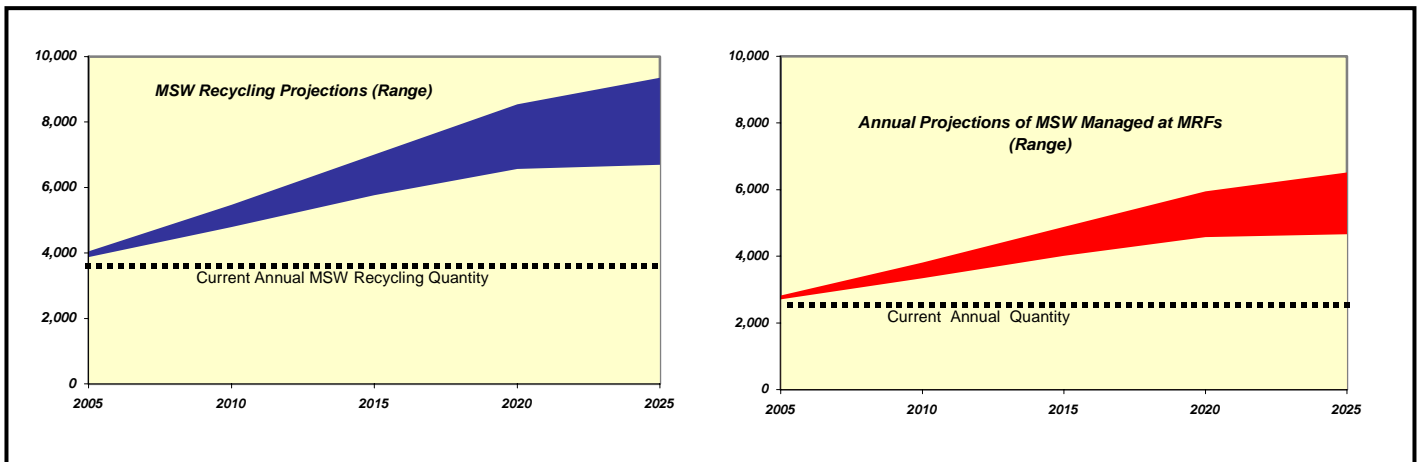
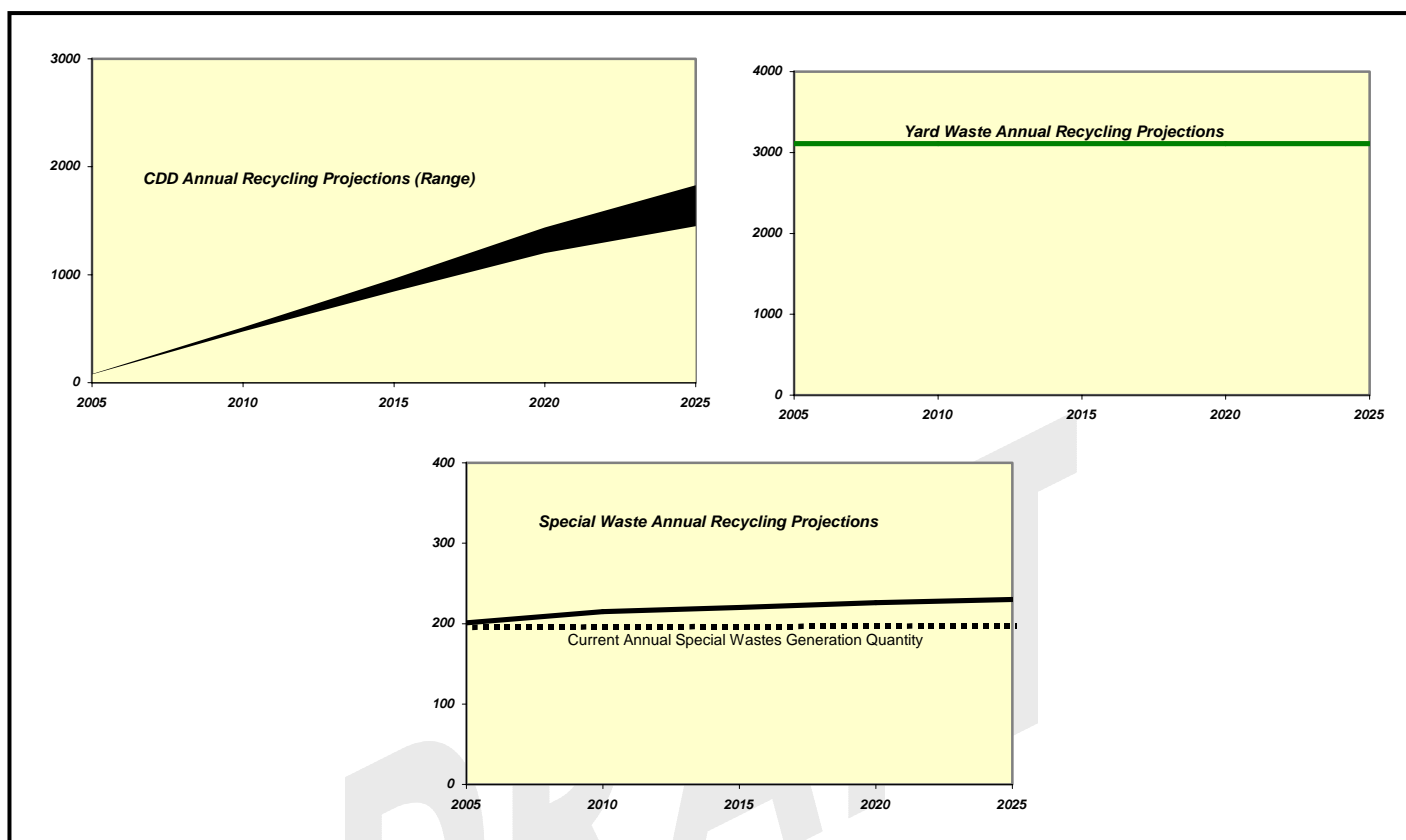


Figure 12-2 (Continued)



Implementation of the SWMP recycling actions is projected to increase the overall City MSW recycling rate to 65 percent.

MSW

The City projects that the full implementation of the SWMP recycling actions will increase the overall City MSW recycling rate to 65 percent over the SWMP planning period.

The City projects the MSW recycling rate will increase gradually over the next 15 years; the increase in recycling will be in concert with the implementation of the SWMP recycling actions. Table 12-3 shows the City's projections for impacts of the SWMP actions on the residential and overall recycling rate in the City.

Table 12-3. City Recycling Rate Projections

	Current Rate	5 Years (2009)	10 years (2014)	15 years (2019)	20 years (2024)
Residential	55.5%	65%	65%	65%	65%
Overall	51.9%	55%	60%	65%	65%

The City projects that improvements to curbside and business recycling will drive the future MSW recycling increases. Much of the recycling increases are expected to be achieved through: (1) expanding

recyclables collected curbside at residences and multifamily buildings, (2) implementing a Pay-As-You-Throw collection system, and (3) increasing business recycling by reducing recycling thresholds.

Implementation of the SWMP recycling actions is projected to increase the overall City CDD recycling rate to 20 percent within 20 years.

CDD

If CDD disposal capacity concerns increase and CDD recycling is economically viable, the City of Falls Church will encourage increased CDD recycling locally and regionally.

The City projects that the full implementation of the SWMP recycling actions will increase the overall City CDD recycling rate to 10 percent within 10 years and 20 percent within 20 years. The City projects the CDD recycling rate will increase gradually over the next 20 years; the increase in recycling will be in concert with the implementation of the SWMP recycling actions.



Yard Waste

The City does not project SWMP recycling actions to impact yard waste recycling quantities. Yard waste recycling projections are the same as the yard waste generation projections presented in Table 12-1.



Special Wastes

Special waste recyclables include used oil, used antifreeze, tires, and batteries. The City does not project SWMP recycling actions to impact special waste recycling quantities. Special waste recycling projections are the same as the special waste generation projections presented in Table 12-1.

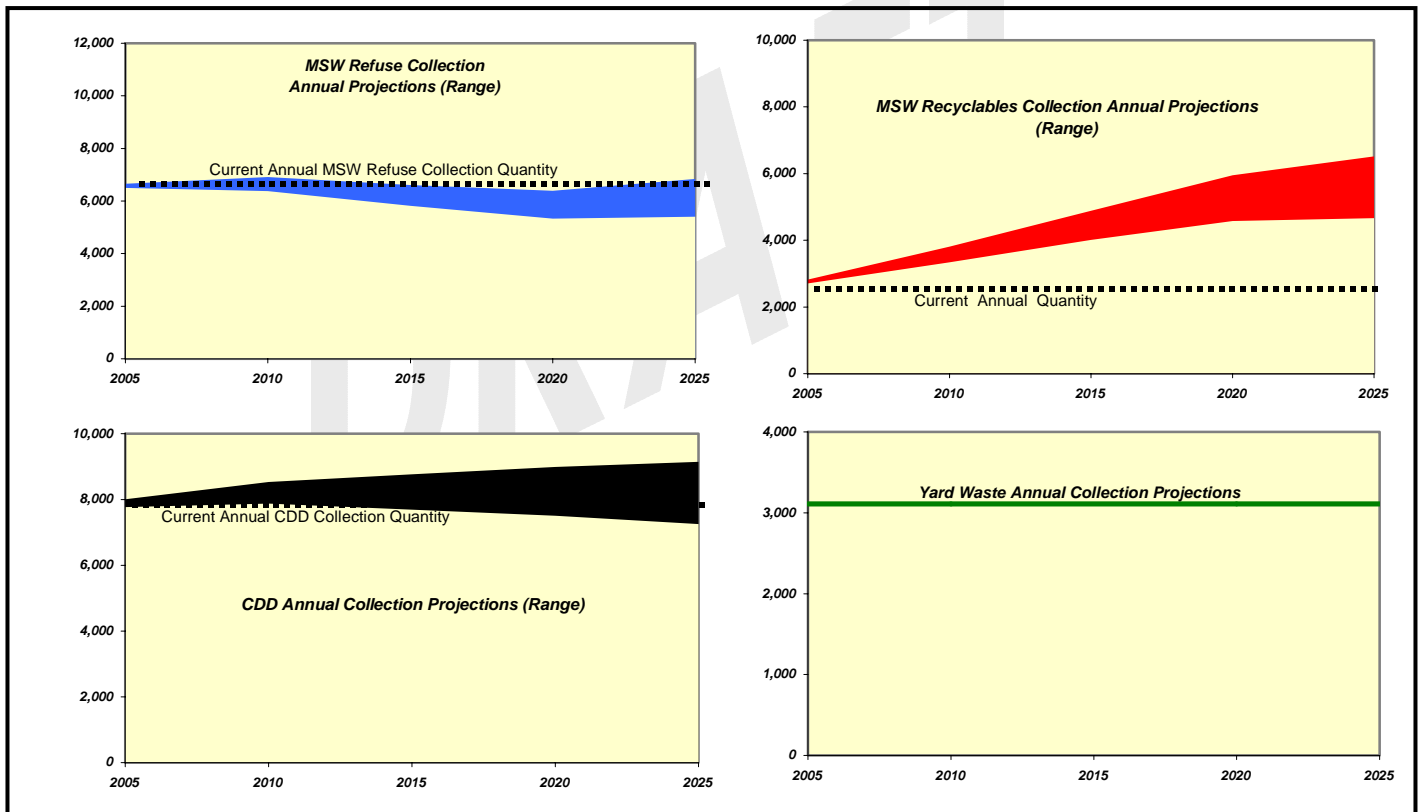
Collection Projections

All waste generated, recycled and disposed in the City of Falls Church will require collection. Table 12-4 and Figure 12-3 show the projected quantities of solid waste collection over the next 20 years.

Table 12-4. City 20-Year Collection Projections for MSW, CDD, and Yard Waste (tons)

Year	MSW Refuse ¹ (Range)	MSW Recyclables Managed by MRFs ¹ (Range)	CDD (Range)	Yard Waste
2004	6,562 - 6,647	2,630 - 2,694	7,816 - 7,975	3,111
2005	6,498 - 6,655	2,703 - 2,825	7,771 - 8,009	3,111
2010	6,376 - 6,911	3,340 - 3,814	7,878 - 8,538	3,111
2015	5,812 - 6,609	4,016 - 4,885	7,691 - 8,764	3,111
2020	5,333 - 6,395	4,579 - 5,954	7,503 - 8,991	3,111
2025	5,402 - 6,834	4,665 - 6,520	7,255 - 9,142	3,111

Figure 12-3. City 20-Year Collection Projections for MSW, CDD, and Yard Wastes (tons)



Transfer Projections

The City of Falls Church SWMP actions include the continued use of Fairfax County's I-66 Transfer Station for MSW, brush, and bagged yard waste, and the City Transfer Yard for vacuumed leaves. These transfer facilities will have sufficient capacity to manage the projected quantities of solid waste



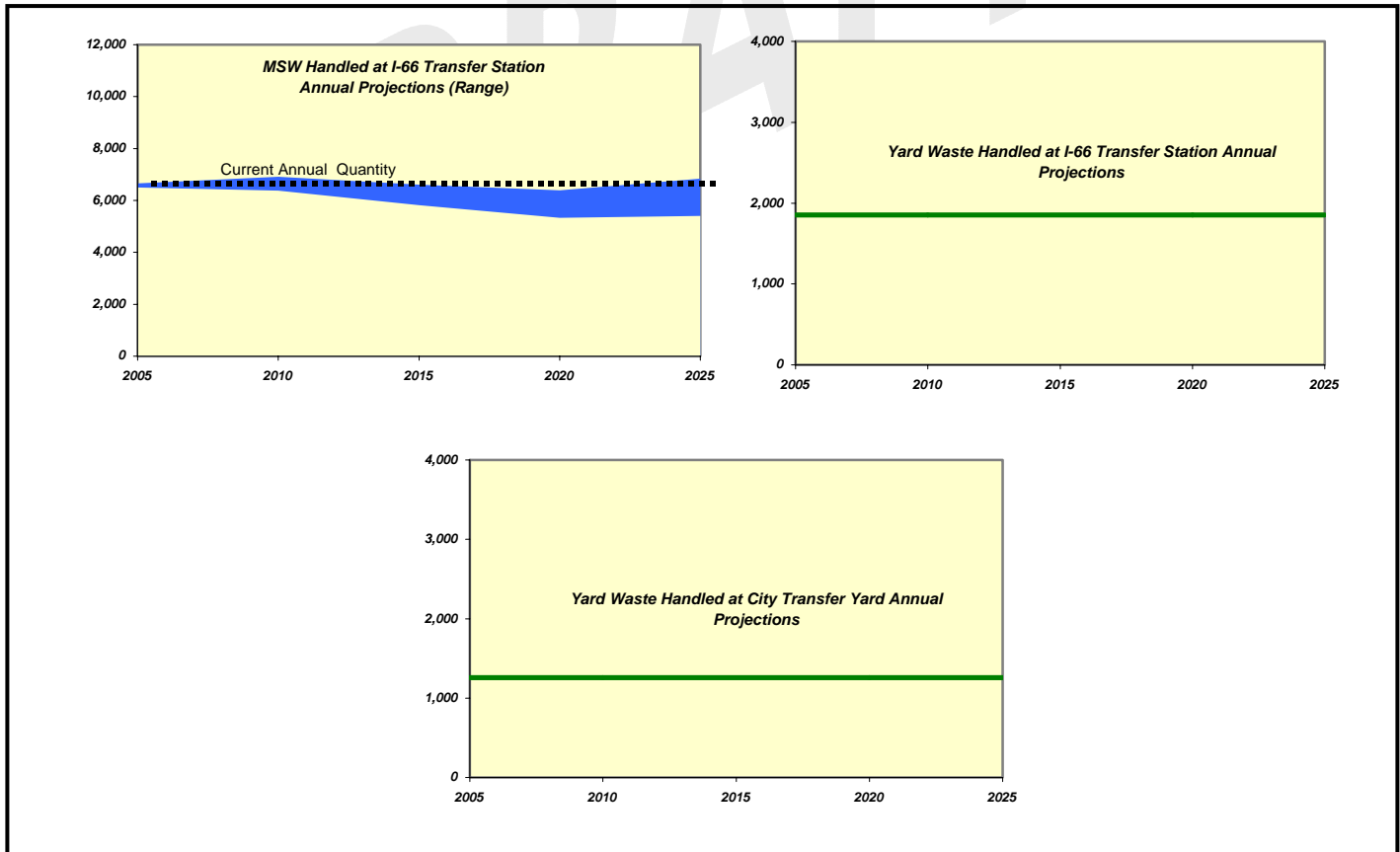
requiring transfer over the SWMP planning period. Table 12-5 and Figure 12-4 show the projected quantities of solid waste transfer over the next 20 years.

Table 12-5. City 20-Year Transfer Projections for MSW, CDD, and Yard Waste (tons)

Year	MSW ¹ Handled at I-66 Transfer Station (Range)	Yard Waste Handled at I-66 Transfer Station	Yard Waste Handled at City Transfer Yard
2004	6,562 - 6,647	1,854	1,257
2005	6,498 - 6,655	1,854	1,257
2010	6,376 - 6,911	1,854	1,257
2015	5,812 - 6,609	1,854	1,257
2020	5,333 - 6,395	1,854	1,257
2025	5,402 - 6,834	1,854	1,257

1 - MSW excluding yard waste and MSW special wastes

Figure 12-4. City 20-Year Transfer Projections for MSW, CDD, and Yard Waste (tons)



Disposal Projections

The City of Falls Church SWMP actions include the continued use of the current disposal system. The City will dispose of all City-generated MSW using Fairfax County's disposal system—the I-95 E/RRF, with out-of-county landfills for overflow. City-generated CDD will be disposed of using landfills located outside the City. All City-generated yard waste will be recycled. Table 12-6 and Figure 12-5 show the projected quantities of solid waste disposal over the next 20 years.



Fairfax County's current disposal system will have sufficient capacity to handle the projected quantities of City-generated MSW requiring disposal over the SWMP planning period.

Table 12-6. City 20-Year Disposal Projections for MSW and CDD (tons)

Year	MSW Disposed at the E/RRF (Range)	MSW Sent to Out-of-County Landfills (Range)	CDD Sent to Landfills (Range)
2004	6,151 - 6,225	407 - 426	7,816 - 7,975
2005	6,096 - 6,243	398 - 416	7,693 - 7,929
2010	5,962 - 6,478	407 - 442	7,405 - 8,025
2015	5,426 - 6,208	376 - 412	6,845 - 7,800
2020	4,992 - 6,037	330 - 371	6,303 - 7,552
2025	5,066 - 6,476	323 - 372	5,804 - 7,341

Figure 12-5. City 20-Year Disposal Projections for MSW and CDD (tons)

